

notes that the male of *G. leucogeranos* has a convoluted trachea, only slightly folded in the *carina sterni*, extending in it for less than half its extent¹; whilst in the female "there was formed a genu of small size, that does not enter the *carina sterni*." The female of *G. carunculata* examined had a trachea as well convoluted as the most developed forms of *G. americana*, whilst in the male the condition was as in the female of *G. leucogeranos*.

Grus australasiana. ♂ [? ♀].

— *canadensis*. ♂.

In *Tetrapteryx paradisea*, according to Yarrell and Tegetmeier, as well as in *Anthropoides virgo* according to Parsons and Yarrell, the trachea is convoluted, but does not enter the *carina sterni*, being contained in a special groove developed along the anterior margin of that bone.

[In both species of *Balearica* the trachea is known to be quite simple; and the same is probably true in *Aramus scolopaceus*.]

3. On the Eggs of some rare Wading Birds from Madagascar.

By J. E. HARTING, F.L.S., F.Z.S.

[Received March 21, 1882.]

Amongst a large collection of eggs recently brought from Madagascar by the Rev. W. Deans Cowan, many of which are of considerable interest as being hitherto undescribed, are the eggs of three species of *Limicolæ* which I should like to bring before the notice of this Society, since they belong to members of a group to which I have for some years been paying special attention.

Mr. Deans Cowan collected in the neighbourhood of Fianarantsoa in the Betsileo country, situated in the south central portion of Madagascar; and the extent of his collection shows how rich a field for ornithologists is the district in which he has for some years resided.

The three species of Wading-birds of which I now exhibit the eggs, as well as the skins, are a Pratincole (*Glareola ocularis*, Verreaux), a Sand-Plover (*Ægialitis geoffroyi*, Wagler), and a Snipe (*Gallinago macrodactyla*, Bonaparte). The Pratincole and Snipe, which so far as I am aware have not been met with out of Madagascar, are both very rare in collections; the Sand-Plover, being generally distributed throughout Southern Asia, the Malay Archipelago, and Eastern Africa, is very much better known.

1. *GLAREOLA OCULARIS*, Verreaux, was first brought to the notice of naturalists by the late Jules Verreaux so long ago as 1833, when at a meeting of the South-African Institution at Cape Town in that year he exhibited and described a specimen, which, with other skins, he had then lately received from Madagascar.

¹ The observations of Mr. A. O. Hume (*cf.* Tegetmeier's 'Cranes,' p. 39, &c.) do not, therefore, always hold good for this species.

Equal in size to the well-known Collared Pratincole (*G. pratincola*), which, dispersed throughout Southern and Eastern Europe, Africa, and a great portion of Southern Asia, occasionally visits the British Islands, it is distinguished from that species by having no "collar," the head and nape black, a white spot under the eye and passing behind it, the quills much blacker than in *G. pratincola*, the tail squarer and blacker, the outer feathers scarcely longer than the rest, and with a white spot on their distal half. The species is well figured in the excellent work of Messrs. Pollen and Van Dam (*Recherches sur la Faune de Madagascar*, 1868), who, however, give no account of its breeding-habits, nor describe its eggs.

It was not until thirty years after this bird had been described that any information concerning its habits was published. In 1863 Messrs. Roch and Edward Newton, in an account of their visit to Madagascar printed in 'The Ibis' for that year, recorded their having met with it near Tamatave. They remarked:—"At our first halting-place on the road from Tamatave to the capital, on the 1st of October, we saw and shot several Pratincoles. The river Hivondrona runs out into the sea about a mile and a half below a village bearing the same name, and has on its left bank a treeless sandy plain. Here we found these birds, together with Sanderlings and two species of Plover. Unfortunately, those that we skinned were destroyed, and we have no specimens by which to identify them; but we have little doubt that the Pratincoles were of the same species as an example afterwards obtained by Dr. Roch;" who says:—"At Nossi-bé a small village to the north of Tamatave, I found many Pratincoles in the native burial-ground, which appeared to be their breeding-place, though I was unable to discover either eggs or young. Their manners strongly reminded me of those of the Lapwing, screaming high in the air, and then darting along the ground as if to draw my attention away from their broods. I thus easily obtained several specimens."

The following year Mr. Edward Newton observed these birds in the same locality in September ('Ibis' 1863, p. 455).

Dr. Roch has described the flight of this Pratincole as reminding him of that of the Lapwing; but the late Mr. Swinhoe was doubtless more accurate when, describing the habits of *Glareola orientalis* as observed by him in Formosa, he likened its appearance on the wing to the Golden Plover; for, like that bird, the Pratincoles have long, pointed, narrow flight-feathers, unlike the full rounded wing of the Lapwing.

Their food consists chiefly of sand-beetles and flying ants, of which they are especially fond.

Like other species of the *Limicolæ*, the Pratincoles lay their eggs in a depression of the ground, with very little nest, and the young run as soon as they are hatched.

The egg of *Glareola ocularis* is much paler than that of *G. pratincola*, and assimilates both in shape and colour to the eggs of *Cursorius*, showing an affinity to that genus of birds, which is also indicated in the anatomical structure.

It may be described as of a pale stone-colour, or, to be more accurate, of the colour described and figured by Werner in his 'Nomenclature of Colours' as cream-yellow, spotted or speckled chiefly at the larger end with yellowish-brown and paler brocoli-brown (Werner). It measures 1·4 inch by 1·1 at its greatest diameter. Only one nest was found, containing two eggs. The native name for this bird according to Mr. Deans Cowan is *Hitsikitsidrano*.

2. *ÆGIALITIS GEOFFROYI*, Wagler.

In 'The Ibis' for 1870 I gave as complete a life-history of this species as the materials then available enabled me to prepare, with a figure of the bird in its nuptial plumage. Reference to this account will show that the species is widely distributed and has frequently come under the observation of naturalists at the periods of its migration, or in its winter-quarters; but I was obliged to confess my inability to describe the egg (*tom. cit.* p. 383). Jerdon, writing of its habits in India, thought it "retired northwards to breed;" and Dr. Leith Adams believed he had found it breeding on the banks of the Chimouraree Lake in Ladakh (P. Z. S. 1859, p. 188), but the description of the bird given by him in his 'Wanderings of a Naturalist in India' (p. 283) shows that it was the closely allied, but smaller, *Ægialitis mongolica* that he met with. *Æ. geoffroyi*, according to Swinhoe, is abundant on the sandy shores of Formosa; and from the fact of the young being found in the island, he conjectured that it breeds there. There can be little doubt that it does so; for several eggs which he took there, and supposed to be those of the Eastern Golden Plover, *Charadrius fulvus*, are evidently too small for that species, and can only belong to *Æ. geoffroyi*. These eggs are now in the collection of Mr. H. Seebohm, and resemble those now exhibited from Madagascar.

As its smaller congener *Æ. mongolicus* does not occur in Madagascar, there is no ground for supposing that the eggs now exhibited can belong to that species; while the eggs of such other Sand-Plovers as are known to occur in the island are so much smaller in size, and so different in markings, that they cannot for a moment be confounded. *Æ. geoffroyi* is common enough in Madagascar, frequenting sandy shores and going up the rivers for some distance inland to breed.

The egg is of a cream-yellow, blotched chiefly at the larger end with pitch-black. It measures 1·4 inch by 1 inch.

The native name for this bird, and applied to all the Sand-Plovers which are found there, is *Vikiviki*.

3. *GALLINAGO MACRODACTYLA*, Bonaparte.

G. bernieri, Pucheran.

This Snipe, a very rare one in collections, is characterized by the unusually long toes, and by the extraordinary length of bill which distinguishes it from all its congeners.

Hardly any thing has been published concerning it beyond the

mere identification of the species under the name bestowed upon it by Pucheran (Rev. Zool. 1845, p. 279). Thus, it appears in a collection of Madagascar birds brought home by Mr. W. Gerrard, and described by Professor Newton in the 'Proceedings' of this Society, 1865, p. 832; it is noted as amongst the birds observed in Madagascar by M. Grandidier between the years 1865-67 (Rev. et Mag. de Zool. 1868, p. 4); and it appears again in a collection made in Madagascar by Mr. Crossley in 1869, and described by Mr. Sharpe, P. Z. S. 1870, p. 399.

Dr. Hartlaub has of course included it in both his works on Madagascar (Orn. Beitrag Faun. Madagasc. 1861, p. 78, and 'Die Vögel Madagascars,' 1877, p. 333); but little information is given concerning it beyond what had already been made known by Messrs. Roch and Edward Newton in their remarks on Madagascar birds, published in 'The Ibis' in 1863, where the fullest notice which has appeared of this bird is given.

These gentlemen state that they found it tolerably common along the coast, where it had evidently just been breeding, as Dr. Roch found a young one about four days old, on the 3rd October, between Tranomaro and Mamorack; unfortunately it was not preserved. In colouring it was said to approach the young of *Gallinago scolopacina* more than either *G. major* or *G. gallinula*.

In the valleys near Ambobhitroni, about ninety-four miles from the coast, Messrs. Roch and Newton found it more numerous, and in about half an hour killed nine couple. Their flight was slow and steady, and they did not twist in the least. These were evidently not breeding. The largest measured was 19.25 inches in extent of wing, and 17.5 inches from the tip of the bill to the end of the tail.

According to Messrs. Roch and Newton sixteen appeared to be the normal number of tail-feathers in this Snipe, or two more than originally ascribed to the species by Bonaparte. Unfortunately, of the three specimens of this bird now before me, not one of them has the tail perfect, so that at present I am unable to check the observations of my predecessors upon this point.

With regard to the breeding of this species, Dr. Hartlaub has briefly described the egg (Vögel Madagascars, p. 335), and Dr. Roch, as already stated, found a young one which he was unable to preserve. I have now before me both egg and young, brought home by Mr. Deans Cowan from Fianarantsoa, Betsileo, where the bird is called *Kekakeka*. The native name *Rava-rava* referred to this species by Prof. Newton, in the Catalogue already referred to (P. Z. S. 1865, p. 832), is, according to Mr. Deans Cowan, properly applicable to the Painted Snipe (*Rhynchæa capensis*).

The egg, which measures 1.7 inch by 1.2 at its greatest diameter, is of a honey-yellow colour (Werner), spotted chiefly at the larger end with umber-brown.

The young bird when a few days old is scarcely to be distinguished from the young of our Common Snipe (*G. scolopacina*) at the same age, save for its greater length of bill, legs, and toes. As regards

coloration, a description of the one would apply almost equally well to the other.

The measurements of a young bird of *G. macrodactyla* less than a week old, and consequently unable to fly, are:—Bill 1·5, wing 2·5, bare portion of tibia ·5, tarsus 1·7 inch.

Before concluding my remarks on this species it seems desirable to say a few words on the synonymy, since the bird has hitherto been usually known as *Gallinago bernieri* of Pucheran, who named it after the first collector who brought specimens of the bird to Europe. Pucheran's description was published in the 'Revue de Zoologie,' 1845; but some years prior to this, namely between 1832 and 1841, Bonaparte's 'Iconografia della Fauna Italica' appeared in parts (unpaged). In one of these parts, in the course of a notice of *Gallinago brehmi* (a variety of the common European Snipe), of which the part in question contains a coloured figure, a review of the various species of *Gallinago* known to the author is given, in the course of which two new species are described:—one from Madagascar, named by Bonaparte *macrodactyla*; the other from the Cape, named by him *nigripennis*, and subsequently by Rüppell (1845) *æquatorialis*. His description of *macrodactyla*, which applies to the present species, was founded upon a specimen in the Paris Museum, which had been brought by Dr. Bernier from Madagascar, and was in all probability the same type from which Pucheran subsequently described and named his *Gallinago bernieri*. It is evident, therefore, that Bonaparte's name for this species, *Gallinago macrodactyla*, has precedence.

I have seen no specimen of this bird from any part of Africa; and, so far as at present known, it appears to be confined entirely to Madagascar.

4. Description of a new Species of Bird of the Genus *Tephras*.

By E. P. RAMSAY, F.L.S., C.M.Z.S.

[Received March 14, 1882.]

The species which I propose to describe is based on a specimen from a collection made along the south coast of New Guinea and at the Aru Islands by the late S. White, Esq., of South Australia. I propose to call it

TEPHRAS WHITEI, sp. nov.

All the upper surface dull brown washed with olive-yellow, tinged with brown on the head; brighter on the rump and upper tail-coverts, and on the outer margins of the webs of the wing- and tail-feathers; the wings and tail brown above and below; axillaries and under wing-coverts whitish, inner margin of the webs of the quills towards the base whitish; shafts of the wing and tail-feathers below white, above brown; all the under surface of the body, chin, margins of shoulders below, and the under tail-coverts citron-yellow, deeper